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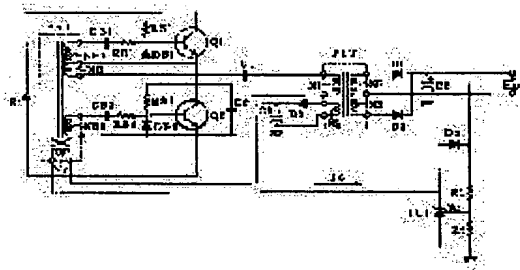
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## (54) SWITCHING POWER SUPPLY

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To prevent secondary breakdown of circuit element which form a switching power supply when a load connected to the secondary side is terminated, without resulting in discrepancies such as rise in cost and deterioration in characteristics.

**SOLUTION:** A switching power supply is constituted by switching elements Q1, Q2, which is capable of supplying an input voltage intermittently to the primary coil N1 of an insulated converter transformer PIT and a shut regulator IC1, which varies a control current  $I_c$  obtained from a coil Ns of the insulated counter transformer PIT to set an output voltage  $E_o$  output from the secondary coil N2 of the insulated converter transformer PIT to the constant voltage and controls the input voltage level supplied to the primary coil N1 of the insulated converter transformer. An output voltage from the second any side of the insulated converter transformer PIT is controlled by outputting a control current  $I_c$ , obtained from the coil Ns to the secondary side ground of the insulated converter transformer via a protection diode Ds, when the load connected to the secondary side of the insulated converter transformer PIT is terminated.



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